
Foreword

As part of its continuing effort to enhance the quality and consistency of oversight activities, the Office of the Deputy Assistant Secretary for Oversight initiated an extensive review of all aspects of the Accident Investigation Program. As a result, this workbook has been revised to improve the Accident Investigation Program.

Substantive Workbook Changes

Section 1

- Section 1.2.4, “Broad Environmental Factors,” is retitled “Physical Work Environment,” and a new section 1.2.5, “Organizational Work Environment,” was added. The seven guiding principles from DOE Policy 450.4, *Safety Management System Policy*, are summarized and described as characteristics of the organizational work environment that are necessary to prevent accidents.

Section 5

- Added a new Section 5.1.5 entitled, “Addressing Potential Conflicts of Interest.” This section describes the steps for resolving and documenting the resolution of any potential conflict of interest concerns regarding board members, advisors, and consultants. Additionally, a new “Conflict of Interest Certification Form” was added to the end of Section 5.
- Section 5.2.5, “Coordinating Internal and External Communication,” was revised by adding a bullet at the top of the second column on page 5-11 regarding the required notifications when a potential Price-Andersen Amendments Act non-compliance is identified during an investigation.

Section 6

- Table 6-4, “Interviewing Do’s,” was revised by adding a bullet under “Create a Relaxed Atmosphere,” which states, “Conduct the interview in a neutral location that was not associated with the accident.” This reminder was added based on lessons learned from investigations conducted since the last revision of the workbook.
- Section 6.4, “Examining Organizational Concerns, Management Systems, and Line Management Oversight,” was revised to more clearly describe using DOE Policy 450.4 as a framework for investigating management systems. The typical questions for addressing the five core functions in Table 6-7 were revised and Table 6-8, “Typical Questions for Addressing the Seven Guiding Principles of Integrated Safety Management,” was added. These tables illustrate how lines of inquiry can be developed that are specific to the accident and involve the principles and core functions of integrated safety management.

Section 7

- Moved Section 7.5, “Determining Causal Factors,” to the front of Section 7 to become Section 7.2, because it provides definitions of the terms that are used throughout the remainder of the section.
- Revised the text of Section 7.2.3, “Root Causes,” to more clearly incorporate safety management considerations. The root cause examples in the text and in the text box for this section were revised to more directly pertain to integrated safety management principles and core functions.
- Added a new Section 7.2.4, “Importance of Causal Factors.” This section emphasizes the importance of identifying causal factors in the management systems failures that lead to the accident. It also stresses the importance of assigning responsibility for the root cause(s) at the appropriate line management and oversight levels.
- Extensively revised Section 7.3.2, “Barrier Analysis,” to illustrate applying integrated safety management core functions and principles in conducting a barrier analysis. Major changes include:
 - Combining administrative and management barriers on Figure 7-4 into one class of barriers entitled, “Management Barriers”
 - Adding guidance regarding the types of information that might be needed to analyze safety management barriers at the activity, facility/corporate, and institutional levels
 - Simplifying Table 7-4, “Sample Barrier Analysis Worksheet”
 - Revising the Basic Barrier Analysis Steps text box to be consistent with revised Table 7-4
 - Revising Figure 7-5 to highlight physical vs. management barriers and adding Figure 7-6 to show how the five core functions can be used to organize and present the results of a barrier analysis in the investigation report.
- Revised Section 7.3.3, “Change Analysis,” by deleting the old Table 7-3, “Considerations for Completing the Change Analysis Worksheet,” and adding text to clarify the change analysis process. This includes revising the *Note* in the last paragraph of the section to incorporate an example of the compounding effects of incremental change.
- Revised Section 7.3.5, “Root Cause Analysis,” Section 7.3.5.1, “Tier Diagraming,” and Table 7-8, “Example Tier Diagram Approach,” to emphasize the use of the core functions and guiding principles of integrated safety management as a framework for identifying the underlying management system deficiencies as potential root cause(s).
- Section 9.5, “Review by the Assistant Secretary for Environment, Safety and Health” (part of Report Writing), was revised to clarify that Type B accident investigation reports will be reviewed by EH-2, with comments incorporated prior to report publication and distribution by the appointing official.